

INTEGRALLY FORMED BRA

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a bra, and more particularly to an integrally formed bra without seams.

2. The Related Art

[0002] Since the first bra with modern woman underwear's embryo patented in 1913, bras have been modified through about 90 years and become woman's closest partners. Bras belong to an internal dressing. Therefore, comfort shall be a necessary consideration. Moreover, a bra can affect a curved show of a wearer. Various bra designs for improving wearer's curve have been proposed. In addition, in order to match different costume fashions with seasons, bra designs have been changed in styles.

[0003] With the steps of costume fashions, although costume designs of barebacked dressing, sling skirt, gauze clothing and bodysuit can show an attractive figure of a wearer, a conventional bra cannot often match these costumes. To match the requirements, bra designs trends to lighter and thinner even to be hidden. Therefore how to manufacture an integrally formed bra without seams on the surface thereof is a struggle goal of bra manufacturers.

[0004] Furthermore, bras with steel rims have almost become a mainstream market now. The design of steel rims can help pushing the wearer's breasts toward the central part and supporting and uplifting the breasts. However, the conventional manufacturing ways of a steel rim attached to a bra cup are mainly by sewing. It is hard to avoid seams on the surface of a bra. Therefore, a bra with steel rims and without seams on the surface thereof can further meet the market requirements.

[0005] Taiwan Patent Publication No. 69648 discloses an integrally formed bra cup. A cup body is coated on the inner and outer peripheries thereof with adhesive for adhering to an inner fabric and an outer fabric. The cup body, inner fabric and outer fabric are then adhered together using hot pressing without sewing. However, this integrally formed way is limited to the adhesion of a cup body, an inner fabric and an outer fabric. The final product is only a bra cup not a complete bra. The subsequent joining procedures of for example shoulder straps, back straps, steel rims and clasp device assembly to the bra cup still need to sew. As a whole, it is not only waste time, but also not meet effective cost.

[0006] In addition, Taiwan Patent Publication No. 507543 discloses a bra with hidden steel rims and without seams on the surface thereof. Firstly, a steel rim, an under piece and a back piece are sewed to a bra cup to form a liner. Then, an inner fabric and an outer fabric with same contour as the liner are peripherally sewed to the liner to a bra with steel rims and without seams on the surface thereof. However, this bra has a complicate sewing procedure. And the liner has a thickness to some extent that cannot really achieve a lighter and thinner goal.

[0007] Based on the above descriptions, an integrally formed bra without seams can further meet a hidden requirement of wearers.

SUMMARY OF THE INVENTION

[0008] An object of the present invention is to provide with a seamless bra with steel rims, which is integrally formed and shows no marks of steel rims and seams on the surface thereof.

[0009] An integrally formed bra according to the present invention comprises two bra cups, two steel rim straps attached with steel rims, an outer fabric, an inner fabric and a set of clasp device assembly. In assembling, the two steel rim straps

attached with steel rims are first sewed to the bra cups at the lower edges respectively. Then, the bra cups, outer fabric, inner fabric and the clasp device assembly are coated on the peripheries or the needed joints thereof with adhesive. Finally, the outer fabric, inner fabric, bra cups sewed with the steel rim straps, and clasp device assembly are respectively positioned at a predetermined position of a mold to form an integrally formed seamless bra by hot pressing.

[0010] In comparison with the prior arts, the integrally formed bra according to the present invention shows no marks of steel rims and seams on the surface thereof. It is not needed for this bra to assemble a liner first that can thin a bra. The manufacturing process thereof is simple that can largely reduce the manufacturing time and cost.

[0011] The present invention will be readily understood to those skilled in the art after reading the detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Figure 1 is a perspective view of a clasp device assembly according to the present invention;

[0013] Figure 2 is a perspective view of a bra according to the present invention;

[0014] Figure 3 is a structural drawing of a steel rim strap;

[0015] Figure 4 is a front view of the bra of the present invention; and

[0016] Figure 5 is a rear view of the bra of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0017] Referring to Figure 2, an integrally formed bra according to the present invention comprises an outer fabric 1, an inner fabric 2, two bra cups 3, two steel rim

straps 4 attached with steel rims and a set of clasp device assembly 5. The clasp device assembly 5 is shown in Figure 1. Clasp devices 51 are secured to a lining piece 52 by sewing. The lining piece 52 is coated on the peripheries thereof with adhesive. An outer fabric 53 and an inner fabric 54 with same contour as the lining piece 52 are also coated on the peripheries thereof with adhesive. The lining piece 52, outer fabric 53 and inner fabric 54 are joined together by hot pressing to form a clasp device assembly 5. The outer fabric 1 is of a piece body with two cup-shaped breasts 11 and two back straps 12 extended toward both sides and then back. The outer fabric 1 can be tightly attached to the inner fabric 2 with corresponding size and shape to the outer fabric 1. In assembling, the two steel rim straps 4 shown in Figure 3 are first sewed to the two bra cups at the lower edges respectively. Then the bra cups 3, outer fabric 1, inner fabric 2 and the clasp device assembly 5 are coated on the peripheries or the needed joints thereof with adhesive. Finally, the outer fabric 1, inner fabric 2, bra cups 3 sewed with the steel rim straps 4, and clasp device assembly 5 are respectively positioned at a predetermined position of a mold to form an integrally formed seamless bra by hot pressing. Figures 4 and 5 respectively show a front view and a rear view of a bra of the present invention.

[0018] The outer fabric 1 and the inner fabric 2 are of a piece body that can be integrally cut by a die. The clasp device 51 can be a sticking clasp or a conventional clasp device. Moreover, two fixed or movable shoulder straps can be optionally secured to the bra cup by hot pressing for matching different dressing.

[0019] The above statement is only for illustrating the preferred embodiment of the present invention, and not for giving any limitation to the scope of the present invention. It will be apparent to those skilled in this art that all equivalent

modifications and changes shall fall within the scope of the appended claims and are intended to form part of this invention.